

**ATTACHMENT D**

**INSPECTION SCHEDULE, PROCESS AND FORMS**

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## ATTACHMENT D

### INSPECTION SCHEDULE, PROCESS AND FORMS

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## ATTACHMENT D

### INSPECTION SCHEDULE, PROCESS AND FORMS

#### Introduction

This Permit Attachment describes the facility inspections (including container inspections) that are conducted to detect malfunctions, deterioration, operator errors, and discharges that may cause or lead to releases of hazardous waste or hazardous waste constituents to the environment or that could be a threat to human health.

#### D-1 Inspection Schedule

Equipment instrumental in preventing, detecting, or responding to environmental or human health hazards, such as monitoring equipment, safety and emergency equipment, security devices, and operating or structural equipment are inspected. The equipment will be inspected for malfunctions, deterioration, potential for operator errors, and discharges which could lead to a release of hazardous waste constituents to the environment or pose a threat to human health.

The WIPP facility has developed and will maintain a series of written procedures that include all the detailed inspection procedures and forms necessary to comply with 20.4.1.500 NMAC (incorporating 40 CFR §264.15(b)), during the Disposal Phase. Table D-1 lists each item or system requiring inspection under these regulations, the inspection frequency, the organization responsible for the inspection, the applicable inspection procedure, and what to look for during the inspection. 20.4.1.500 NMAC (incorporating 40 CFR §§264.15(b), 264.174, and 264.602) list requirements that are applicable to the WIPP facility.

Operational procedures detailing the inspections required under 20.4.1.500 NMAC (incorporating 40 CFR §§264.15(a) and (b)), are maintained in electronic format on the WIPP computer network, in the Operating Record and, as appropriate, in controlled document locations at the WIPP facility. Frequency of inspections is discussed in detail in Section D-1a(2). Inspections are conducted often enough to identify problems in time to correct them before they pose a threat to human health or the environment and are based on regulatory requirements. The operational procedures assign responsibility for conducting the inspection, the frequency of each inspection, the types of problems to be watched for, what to do if items fail inspection, directions on record keeping, and inspector signature, date, and time. The operational procedures are maintained at the WIPP facility. Table D-1 summarizes inspections, frequencies, responsible organizations, personnel making the inspection (by job title), and the types of anticipated problems as well as the references for the operational procedures. Inspection records are maintained at the WIPP site for three years by the responsible organization shown in Table D-1.

Waste handling equipment and area inspections are typically controlled through established procedures and the results are recorded in logbooks or on data sheets. Operators are trained to consult the logbook to identify the status of any piece of waste handling equipment prior to its use. Once a piece of equipment is identified to be operable, a preoperational inspection is

initiated in accordance with the appropriate inspection procedure in Table D-1. Inspection results as described below are entered in the applicable logbook.

Inspections include identifying malfunctions or deteriorating equipment and structures. Inspection results and data, including deficiencies, discrepancies, or needed repairs are recorded. A negative inspection result does not necessarily lead to a repair. A deficiency, such as low fluid level, may be corrected by the inspector immediately. A discrepancy, such as an increasing trend of a data point, may necessitate additional inspection prior to the next scheduled frequency. The actions taken (corrected, additional inspection, or Action Request (**AR**) for repair submitted) are recorded on the inspection form, the WIPP automated Maintenance Management tracking program (**CHAMPS**) work order sheet, or the equipment logbook, whichever is applicable.

Items that are operational with restrictions are tagged with those restrictions. Items that are not operational are tagged and locked to prevent their use. Tagged and locked items are listed on the Tagout/Lockout Index. Once a scheduled repair or replacement is accomplished in accordance with the work authorization procedures, the tag or lock is removed from the item in accordance with the equipment tagout/lockout procedures. Normally, the individual inspecting the equipment/system is not qualified to make repairs and consequently, prepares an AR if repairs are needed. The AR is tracked by the CHAMPS system through the work control process. When parts are received and work instructions are completed, the work order can be scheduled on the Plan of the Day (**POD**). The POD is held daily to ensure facility configuration can support scheduled work items and to allocate and coordinate the resources necessary to complete the items.

Work orders are released for work by the responsible organization. When repairs are complete the responsible organization tests the equipment to ensure the repairs corrected the problem, then closes out the work order, to return the equipment to an operational status for normal operations to resume. Implementation of these procedures constitutes compliance with 20.4.1.500 NMAC (incorporating 40 CFR §264.15(c)).

Requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.15(d)), are met by the inspections for each item or system included in Table D-1. The results of the inspections are maintained for at least three years. The inspection logs or summary records include the date and time of inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions. Major pieces of waste handling equipment are inspected using proceduralized inspections. Current copies of inspection forms are maintained in the Operating Record. Non-administrative changes (i.e., changes that affect the frequency or content of inspections) to inspection forms must be submitted to the NMED in accordance with the appropriate portions of 20 NMAC 4.1.900 (incorporating 40 CFR §270.42). The status of these pieces of equipment is maintained in an equipment logbook that is separate from the checklist. The logbook contains information regarding the condition of the equipment. Equipment operators are required, by the inspection checklist, to consult the logbook as the first activity in the inspection procedure. This logbook is maintained in the operating record. Equipment that is controlled by a logbook includes the waste handling fork lifts, all waste handling cranes, the adjustable center of gravity lift fixture, the CH transuranic (**TRU**) underground transporter, the facility transfer vehicle, the trailer jockey, and the push-pull attachment. In addition to the inspections listed in Table D-1, many pieces of equipment are

subject to regular preventive maintenance. This includes more in-depth inspections of mechanical systems, load testing of lifting systems, calibration of measurement equipment and other actions as recommended by the equipment manufacturer or as required by DOE Orders. These preventive maintenance activities along with the inspections in Table D-1 make mechanical failure of waste handling equipment unlikely. The WIPP Safety Analysis Report (DOE, 1995a) contains the results of a systematic analysis of waste handling equipment and the hazards associated with potential mechanical failures. Equipment subject to failures that cannot practically be mitigated is retained for analysis and are the basis for contingency planning. The inspection procedures maintained in the Operating Record for operational and preventive maintenance are implemented to assure the equipment is maintained. An example equipment inspection checklist and a typical logbook form are shown as Figures D-1 and D-1. Actual checklists or forms are maintained within the Operating Record.

#### D-1a General Inspection Requirements

Tables D-1 and D-2 of this Permit Attachment list the major categories of monitoring equipment, safety and emergency systems, security devices, and operating and structural equipment that are important to the prevention or detection of, or the response to, environmental or human health hazards caused by hazardous waste. These systems may include numerous subsystems. These systems are inspected according to the frequency listed in Table D-1, a copy of which is maintained at the WIPP facility. The frequency of inspections is based on the nature of the equipment or the hazard and regulatory requirements. When in use, daily inspections are made of areas subject to spills, such as TRU mixed waste loading and unloading areas in the WHB Unit, looking for deterioration in structures, mechanical items, floor coatings, equipment, malfunctions, etc., in accordance with 20.4.1.500 NMAC (incorporating 40 CFR §264.15(b)(4)).

As required in 20.4.1.500 NMAC (incorporating 40 CFR §264.33), the WIPP facility inspection procedures for communication and alarm systems, fire-protection equipment, and spill control and decontamination equipment include provisions for testing and maintenance to ensure that the equipment will be operable in an emergency.

##### D-1a(1) Types of Problems

The inspections for the systems, equipment, structures, etc., listed in Table D-1, include the types of problems (e.g., malfunctions, cracks in coatings or welds, and deterioration) to be looked for during the inspection of each item or system, if applicable, and are in compliance with 20.4.1.500 NMAC (incorporating 40 CFR §264.15(b)(3)).

##### D-1a(2) Frequency of Inspections

Tables D-1 and D-2 of this Permit Attachment list the inspection frequencies and monitoring schedule for equipment and systems subject to the 20.4.1 NMAC hazardous waste management requirements. The frequency is based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunction, or any operator error, goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, are inspected daily when in use, consistent with the requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.15(b)(4)).

D-1a(3) Monitoring Systems

There are two monitoring systems used at the WIPP to provide assurance that facility systems are operating correctly, that areas can be used safely, and that there have been no releases of hazardous waste constituents. These systems are shown in Table D-2 and include the geomechanical monitoring system and the central monitoring system (**CMS**). The geomechanical monitoring system is used to assess the condition of mined excavations to assure no unsafe conditions are allowed to develop. The CMS continuously assesses the status of the fixed radiation monitoring equipment, electrical power, fire alarm systems, ventilation system, and other facility systems including water tank levels. In addition, the CMS collects data from the meteorological monitoring system.

D-1b Specific Process Inspection Requirements

20.4.1.500 NMAC (incorporating 40 CFR §264.15(b)(4)), requires inspections of specific portions of a facility, rather than the general facility. These include container storage areas and miscellaneous units. Both are addressed below.

D-1b(1) Container Inspection

Containers are used to manage TRU mixed waste at the WIPP facility. These containers are described in Permit Module III. Off-site CH TRU mixed waste will arrive in 55-gallon drums arranged as seven (7)-packs, in Ten Drum Overpacks (**TDOP**), in 85-gallon drums arranged as four (4) packs, in 100-gallon drums arranged as three (3) packs, or in standard waste boxes (**SWB**). The waste containers will be visually inspected to ensure that the waste containers are in good condition and that there are no signs that a release has occurred. This visual inspection shall not include the center drums of 7-packs and waste containers positioned such that visual observation is precluded due to the arrangement of waste assemblies on the facility pallets. If waste handling operations should stop for any reason with containers located on the TRUPACT-II Unloading Dock (**TRUDOCK** storage area of the WHB Unit) in the Contact Handled Packages, primary waste container inspections could not be accomplished until the containers of waste are removed from the shipping containers.

Inspections will be conducted in the Parking Area Unit at a frequency not less than once weekly. These inspections are applicable to loaded, and stored Contact Handled Packages. The perimeter fence located at the lateral limit of the Parking Area Unit, coupled with personnel access restrictions into the WHB Unit, will provide the needed security. The perimeter fence and the southern border of the WHB shall mark the lateral limit of the Parking Area Unit. Radiologically controlled area can be established temporarily with barricades. More permanent structures can be installed. The western boundary can be established with temporary barricades since this area is within the perimeter fence. Access to radiologically controlled areas will only be permitted to personnel who have completed General Employee Radiological Training (**GERT**), a program defined by the Permittees, or escorted by personnel who have completed GERT. This program ensures that personnel have adequate knowledge to understand radiological posting they may encounter at the WIPP site. The fence of the Radiologically Controlled Area, south from the WHB airlocks, was moved to provide more maneuvering space for the trucks delivering waste. Since waste to be stored in the Parking Area Unit will be in sealed Contact Handled Packages, there will be no additional requirements for

1 engineered secondary containment systems. Inspections of the Contact Handles Packages  
2 stored in the Parking Area Unit shall be conducted at a frequency no less than once weekly and  
3 will focus on the inventory and integrity of the shipping containers and the spacing between  
4 trailers carrying the Contact Handled Packages. This spacing will be maintained at a minimum  
5 of four feet.

6 Container inspections will be included as part of the surface TRU mixed waste handling areas  
7 (i.e. Parking Area Unit and WHB Unit) inspections described in Table D-1. These inspections  
8 will also include the Derived Waste Storage Area of the WHB Unit. The Derived Waste Storage  
9 Area will consist of containers of 55 or 85-gallon drums or SWBs. The total storage volume of  
10 this area is up to 66.3 cubic feet (1.88 cubic meters). A Satellite accumulation area (**SAA**) may  
11 be required in an area adjacent to the TRUDOCKs. This SAA will be set up on an as needed  
12 basis at or near the point of generation and the derived waste will be discarded into the active  
13 derived waste container. All SAAs will be inspected in accordance with 20.4.1.300 NMAC  
14 (incorporating 40 CFR §262.34).

#### 15 D-1b(2) Miscellaneous Unit Inspection

16 20.4.1.500 NMAC (incorporating 40 CFR §264.602), requires that inspections required in  
17 20.4.1.500 NMAC (incorporating 40 CFR §264.15 and §264.33), as well as any additional  
18 requirements needed to protect human health and the environment, be met. The requirements  
19 of 20.4.1.500 NMAC (incorporating 40 CFR §264.15 and §264.33) are discussed in Section D-1  
20 of this Permit Attachment, along with how the WIPP facility complies with those requirements for  
21 standard types of inspections. Inspection frequencies for geomechanical monitoring equipment  
22 are provided in Table D-1. The monitoring schedule for geomechanical instrumentation is given  
23 in Table D-2.

#### 24 References

25 DOE, 1997. "WIPP Safety Analysis Report," DOE/WIPP-2065. Rev. 2, U.S. Department of  
26 Energy. Washington, D.C., March 1997.

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1

## FIGURES

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TYPICAL EQUIPMENT WEEKLY CHECK LIST		
<div style="display: flex; justify-content: space-around;"> <span><input checked="" type="checkbox"/> OK</span> <span><input checked="" type="checkbox"/> Adjustment Made</span> <span><input type="checkbox"/> Repairs Required</span> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span>AR Written <input type="checkbox"/> Yes <input type="checkbox"/> No</span> <span>AR # _____</span> </div>		
(check or complete appropriate information)		
ITEM INSPECTED	Condition	Comments/Corrective Action
<b>Mechanical Checks:</b> (examples)		
Oil level		
Radiator fluid level		
Automatic transmission fluid level		
Operate all valves/check gauges		
Emergency brake		
Fuel level (> ¾ full)		
Oil pressure (at warm idle)		
Tire Pressure		
Sirens, horn, & back-up alarm		
<b>Deterioration Checks:</b> (examples)		
Fan belts		
Battery (terminals, cables)		
Run generator 5 min.		
Hose, nozzles & valves		
<b>Leaks/Spills Checks:</b> (examples)		
Leaks around pump		
Foam tank level		
<b>Required Equipment:</b> (examples)		
Inspect SCBAs (> 4050 psi)		
Hand tools & equipment		
Trauma Kit		
<div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div>Inspected by: _____</div> <div>Print Name</div> <div>Signature</div> <div>Time/Date</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div>Inspected by: _____</div> <div>Print Name</div> <div>Signature</div> <div>Time/Date</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div>Reviewed by: _____</div> <div>Print Name</div> <div>Signature</div> <div>Time/Date</div> </div> <div> <b>Comments:</b> _____          _____          _____       </div>		

**NOTE: All items that are mandatory for every inspection form are shown in bold.**

Figure D-1  
Typical Inspection Checklist

1 HOUR METER READING \_\_\_\_\_ EQUIPMENT NO. \_\_\_\_\_

2 **DEFICIENCIES NOTED:** \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

5 \_\_\_\_\_

6 \_\_\_\_\_

7 PRE OPS COMPLETED PER {Procedure Number} SAT \_\_\_\_\_ **PROBLEMS NOTED** \_\_\_\_\_

8 **CORRECTIVE ACTIONS TAKEN:** \_\_\_\_\_

9 \_\_\_\_\_

10 \_\_\_\_\_

11 \_\_\_\_\_

12 \_\_\_\_\_

13 \_\_\_\_\_

14 \_\_\_\_\_

15 **OPERATOR**  
16 **SIGNATURE**

**DATE**

**TIME**

**SUPERVISOR**  
**SIGNATURE/DATE**

17 \_\_\_\_\_

18 **NOTE: All items that are mandatory for every inspection form are shown in bold.**

Figure D-2  
Typical Logbook Entry

## **TABLES**

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**TABLE D-1  
INSPECTION SCHEDULE/PROCEDURES**

System/Equipment Name	Responsible Organization	Inspection <sup>a</sup> Frequency and Job Title of Personnel Normally Making Inspection	Procedure Number and Inspection Criteria
Air Intake Shaft Hoist	Underground Operations	Preoperational <sup>c</sup> See Lists 1b and c	WP 04-HO1004 Inspecting for Deterioration <sup>b</sup> , Safety Equipment, Communication Systems, and Mechanical Operability <sup>m</sup> in accordance with Mine Safety and Health Administration (MSHA) requirements
Ambulances (Surface and Underground) and related emergency supplies and equipment	Emergency Services	Weekly See List 11	PM000030 Inspecting for Mechanical Operability <sup>m</sup> , Deterioration <sup>b</sup> , and Required Equipment <sup>n</sup>
Adjustable Center of Gravity Lift Fixture	Waste Handling	Preoperational See List 8	WP 05-WH1410 Inspecting for Mechanical Operability <sup>m</sup> and Deterioration <sup>b</sup>
Backup Power Supply Diesel Generators	Facility Operations	Monthly See List 3	WP 04-ED1301 Inspecting for Mechanical Operability <sup>m</sup> and Leaks/Spills by starting and operating both generators. Results of this inspection are logged in accordance with WP 04-AD3008.
Facility Inspections (Water Diversion Berms)	Facility Engineering	Annually See List 4	WP 10-WC3008 Inspecting for Damage, Impediments to water flow, and Deterioration <sup>b</sup>
Central Monitoring Systems (CMS)	Facility Operations	Continuous See List 3	Automatic Self-Checking
Contact-Handled (CH) TRU Underground Transporter	Waste Handling	Preoperational See List 8	WP 05-WH1603 Inspecting for Mechanical Operability <sup>m</sup> , Deterioration <sup>b</sup> , and area around transporter clear of obstacles
Facility Transfer Vehicle	Waste Handling	Preoperational See List 8	WP 05-WH1406 Inspecting for Mechanical Operability <sup>m</sup> , Deterioration <sup>b</sup> , path clear of obstacles, and guards in the proper place
Exhaust Shaft	Underground Operations	Quarterly See List 1a	PM041099 Inspecting for Deterioration <sup>b</sup> and Leaks/Spills
Eye Wash and Shower Equipment	Equipment Custodian	Weekly See List 5	WP 12-IS1832 Inspecting for Deterioration <sup>b</sup>
		Semi-annually See List 2a	WP 12-IS1832 Inspecting for Deterioration <sup>b</sup> and Fluid Levels—Replace as Required
Fire Detection and Alarm System	Emergency Services	Semiannually See List 11	PM000027 Inspecting for Deterioration <sup>b</sup> , Operability of indicator lights and, underground fuel station dry chemical suppression system. Inspection is per NFPA 72

**TABLE D-1  
INSPECTION SCHEDULE/PROCEDURES**

	System/Equipment Name	Responsible Organization	Inspection <sup>a</sup> Frequency and Job Title of Personnel Normally Making Inspection	Procedure Number and Inspection Criteria
1	Fire Extinguishers <sup>i</sup>	Emergency Services	Monthly See List 11	PM000036 Inspecting for Deterioration <sup>b</sup> , Leaks/Spills, Expiration, seals, fullness, and pressure
2	Fire Hoses	Emergency Services	Annually (minimum) See List 11	PM000031 Inspecting for Deterioration <sup>b</sup> and Leaks/Spills
3	Fire Hydrants	Emergency Services	Semi-annual/ annually See List 11	PM000034 Inspecting for Deterioration <sup>b</sup> and Leaks/Spills
4	Fire Pumps	Emergency Services	Weekly/annually See List 11	PM000026 Inspecting for Deterioration <sup>b</sup> , Leaks/Spills, valves, and panel lights
5	Fire Sprinkler Systems	Emergency Services	Monthly/ quarterly See List 11	PM000025 Inspecting for Deterioration <sup>b</sup> , Leaks/Spills, static pressures, and removable strainers
6 7 8 9 10	Fire Trucks (Seagrave Fire Apparatus, Emergency One Apparatus, Brush Truck, and Underground Rescue Truck)	Emergency Services	Weekly See List 11	PM000033 Inspecting for Mechanical Operability <sup>m</sup> , Deterioration <sup>b</sup> , Leaks/Spills, and Required Equipment <sup>n</sup>
11 12 13 14	Forklifts Used for Waste Handling (Electric and Diesel forklifts, Push-Pull Attachment)	Waste Handling	Preoperational See List 8	WP 05-WH1401, WP 05-WH1402, WP 05-WH1403, and WP 05-WH1412 Inspecting for Mechanical Operability <sup>m</sup> , Deterioration <sup>b</sup> , and On board fire suppression system
15 16	Hazardous Material Response Equipment	Emergency Services	Weekly See List 11	PM000033 Inspecting for Mechanical Operability <sup>m</sup> , Deterioration <sup>b</sup> , and Required Equipment <sup>n</sup>
17	Miners First Aid Station	Emergency Services	Quarterly See List 11	PM000035 Inspecting for Required Equipment <sup>n</sup>
18 19 20	Mine Pager Phones (between surface and underground)	Facility Operations	Monthly See List 3	WP 04-PC3017 Testing of PA and Underground Alarms and Mine Page Phones at essential locations
21	MSHA Air Quality Monitor	Maintenance/ Underground Operations	Daily <sup>i</sup> See Lists 1 and 10	WP 12-IH1828 Inspecting for Air Quality Monitoring Equipment Functional Check
22 23	Perimeter Fence, Gates, Signs	Security	Daily See List 6	PF0-011 Inspecting for Deterioration <sup>b</sup> and Posted Warnings

**TABLE D-1  
INSPECTION SCHEDULE/PROCEDURES**

System/Equipment Name	Responsible Organization	Inspection <sup>a</sup> Frequency and Job Title of Personnel Normally Making Inspection	Procedure Number and Inspection Criteria
Personal Protective Equipment (not otherwise contained in emergency vehicles or issued to individuals): —Self-Contained Breathing Apparatus	Emergency Services	Weekly See List 11	PM000029 Inspecting for Deterioration <sup>b</sup> and Pressure
Public Address (and Intercom System)	Facility Operations	Monthly See List 3	WP 04-PC3017 Testing of PA and Underground Alarms and Mine Page Phones at essential locations Systems operated in test mode
Radio Equipment	Facility Operations	Daily <sup>j</sup> See List 3	Radios are operated daily and are repaired upon failure
Rescue Truck (Surface and Underground)	Emergency Services	Weekly See List 11	PM000030 and PM000033 Inspecting for Mechanical Operability <sup>m</sup> , Deterioration <sup>b</sup> , Leaks/Spills, and Required Equipment <sup>n</sup>
Salt Handling Shaft Hoist	Underground Operations	Preoperational See List 1b and c	WP 04-HO1002 Inspecting for Deterioration <sup>b</sup> , Safety Equipment, Communication Systems, and Mechanical Operability <sup>m</sup> in accordance with MSHA requirements
Self-Rescuers	Underground Operations	Quarterly See List 1c	WP 04-AU1026 Inspecting for Deterioration <sup>b</sup> and Functionality in accordance with MSHA requirements
Surface TRU Mixed Waste Handling Area <sup>k</sup>	Waste Handling	Preoperational or Weekly <sup>e</sup> See List 8	WP 05-WH1101 Inspecting for Deterioration <sup>b</sup> , Leaks/Spills, Required Aisle Space, Posted Warnings, Communication Systems, Container Condition, and Floor coating integrity
TRU Mixed Waste Decontamination Equipment	Waste Handling	Annually See List 8	WP 05-WH1101 Inspecting for Required Equipment <sup>n</sup>
Underground Openings— Roof Bolts and Travelways	Underground Operations	Weekly See List 1a	WP 04-AU1007 Inspecting for Deterioration <sup>b</sup>
Underground— Geomechanical Instrumentation System (GIS)	Geotechnical Engineering	Monthly See List 9	WP 07-EU1301 Inspecting for Deterioration <sup>b</sup>
Underground TRU Mixed Waste Disposal Area	Waste Handling	Preoperational See List 8	WP 05-WH1810 Inspecting for Deterioration <sup>b</sup> , Leaks/Spills, mine pager phones, equipment, unobstructed access, signs, debris, and ventilation

**TABLE D-1  
INSPECTION SCHEDULE/PROCEDURES**

	System/Equipment Name	Responsible Organization	Inspection <sup>a</sup> Frequency and Job Title of Personnel Normally Making Inspection	Procedure Number and Inspection Criteria
1	Uninterruptible Power	Facility	Daily	WP 04-ED1542
2	Supply (Central UPS)	Operations	See List 3	Inspecting for Mechanical Operability <sup>m</sup> and Deterioration <sup>b</sup> with no malfunction alarms. Results of this inspection are logged in accordance with WP 04-AD3008.
3	TDOP Upender	Waste Handling	Preoperational See List 8	WP 05-WH1010 Inspecting for Mechanical Operability <sup>m</sup> and Deterioration <sup>b</sup>
4	Vehicle Siren	Emergency Services	Weekly See List 11	Functional Test included with inspection of the Ambulances, Fire Trucks, and Rescue Trucks
5	Ventilation Exhaust	Maintenance Operations	Quarterly See List 10	IC041098 Check for Deterioration <sup>b</sup> and Calibration of Mine Ventilation Rate Monitoring Equipment
6	Waste Handling Cranes	Waste Handling	Preoperational See List 8	WP 05-WH1407 Inspecting for Mechanical Operability <sup>m</sup> , Deterioration <sup>b</sup> , and Leaks/Spills
7	Waste Hoist	Underground Operations	Preoperational See List 1b and c	WP 04-HO1003 Inspecting for Deterioration <sup>b</sup> , Safety Equipment, Communication Systems, and Mechanical Operability <sup>m</sup> , Leaks/Spills, in accordance with MSHA requirements
8	Water Tank Level	Facility Operations	Daily See List 3	SDD-WD00 Inspecting for Deterioration <sup>b</sup> , and water levels. Results of this inspection are logged in accordance with WP 04-AD3008.
9	Push-Pull Attachment	Waste Handling	Preoperational See List 8	WP 05-WH1401 Inspecting for Damage and Deterioration <sup>b</sup>
10	Trailer Jockey	Waste Handling	Preoperational See List 8	WP 05-WH1405 Inspecting for Mechanical Operability <sup>m</sup> and Deterioration <sup>b</sup>
11	Facility Grapple	Waste Handling	Preoperational See List 8	To Be Determined (RH equipment)
12	15-Ton Bridge Crane	Waste Handling	Preoperational See List 8	To Be Determined (RH equipment)
13	Hook and Rope on 50/25-Ton Bridge Crane	Waste Handling	Preoperational See List 8	To Be Determined (RH equipment)
14				

## TABLE D-1 (CONTINUED) INSPECTION SCHEDULE/PROCEDURES LISTS

3	<u>List 1: Underground Operations</u>	<u>List 5: General</u>
4	a. Mining Technician *	Equipment Custodian*
5	Senior Mining Technician *	
6	Continuous Mining Specialist *	<u>List 6: Security</u>
7	Senior Mining Specialist *	
8	Mine OPS Supervisor *	Security Protective *
9	b. Waste Hoist Operator	Security Protective Supervisor *
10	Waste Hoist Shaft Tender	
11	c. U/G Facility Operations* - Self Rescuers	<u>List 8: Waste Handling</u>
12	Shaft Technician *	
13	d. Operations Engineer	Manager, Waste Operations
14	Supervisor U/G Services*	TRU-Waste Handler
15	Senior Operations Engineer*	
16	<u>List 2: Industrial Safety</u>	<u>List 9: Geotechnical Engineering</u>
17	a. Safety Technician *	Engineer Technician *
18	Senior Safety Technician *	Associate Engineer *
19	Safety Specialist *	Engineer *
20	Safety Engineer *	Senior Engineer *
21	Industrial Hygienist *	Principal Engineer*
22	b. Fire Protection Engineering *	<u>List 10: Maintenance Operations</u>
23	<u>List 3: Facility Operations</u>	Maintenance Technician *
24	Facilities Technician *	Maintenance Specialist *
25	Senior Facilities Technician *	Senior Maintenance Specialist *
26	Facility Operations Specialist *	Contractor *
27	Central Monitoring Room Operator *	<u>List 11: Emergency Services</u>
28	Central Monitoring Room Specialist *	
29	Operations Engineer	Qualified Emergency Services Personnel
30	Senior Operations Engineer *	Fire Protection Technician
31	Facility Shift Manager	
32	Operations Technical Coordinator *	
33	<u>List 4: Facility Engineering</u>	
34	Senior Engineer *	

**TABLE D-1 (CONTINUED)**  
**INSPECTION SCHEDULE/PROCEDURES NOTES**

- <sup>a</sup> Inspection may be accomplished as part of or in addition to regularly scheduled preventive maintenance inspections for each item or system. Certain structural systems of the WHB, Waist Hoist and Station A are also subject to inspection following severe natural events including earthquakes, tornados, and severe storms. Structural systems include columns, beams, girders, anchor bolts and concrete walls.
- <sup>b</sup> Deterioration includes: cracks, erosion, salt build-up, damage, corrosion, loose or missing parts, malfunctions, and structural deterioration.
- <sup>c</sup> "Preoperational" signifies that inspections are required prior to the first use during a calendar day. For calendar days in which the equipment is not in use, no inspections are required. For an area this includes: area is clean and free of obstructions (for emergency equipment); adequate aisle space; emergency and communications equipment is readily available, properly located and sign-posted, visible, and operational. For equipment, this includes: checking fluid levels, pressures, valve and switch positions, battery charge levels, pressures, general cleanliness, and that all functional components and emergency equipment is present and operational.
- <sup>e</sup> These weekly inspections apply to container storage areas when containers of waste are present for a week or more.
- <sup>g</sup> In addition, the water tank levels are maintained by the CMR and level readouts are available at any time.
- <sup>h</sup> This organization is responsible for obtaining licenses for radios and frequency assignments. They do periodic checks of frequencies and handle repairs which are performed by a vendor.
- <sup>i</sup> Radios are not routinely "inspected." They are operated daily and many are used in day-to-day operations. They are used until they fail, at which time they are replaced and repaired. Radios are used routinely by Emergency Services, Security, Environmental Monitoring, and Facility Operations.
- <sup>j</sup> Fire extinguisher inspection is paperless. Information is recorded into a database using barcodes. The database is then printed out.
- <sup>k</sup> Surface TRU mixed waste handling areas include the Parking Area Unit, the WHB unit, and unloading areas.
- <sup>l</sup> No log forms are used for daily readings. However, readings that are out of tolerance are reported to the CMR and logged by CMR operator. Inspection includes daily functional checks of portable equipment.
- <sup>m</sup> Mechanical Operability means that the equipment has been checked and is operating in accordance with site safety requirements (e.g. proper fluid levels and tire pressure; functioning lights, alarms, sirens, and power/battery units; and belts, cables, nuts/bolts, and gears in good condition), as appropriate.
- <sup>n</sup> Required Equipment means that the equipment identified in Table F-6 is available and usable (i.e. not expired/depleted and works as designed).
- \* Positions are not considered RCRA positions (i.e., personnel do not manage TRU mixed waste).

**TABLE D-2  
MONITORING SCHEDULE**

System/Equipment Name	Responsible Organization	Monitoring Frequency	Purpose
Geomechanical <sup>b</sup>	Geotechnical Engineering	Monthly	To evaluate the geotechnical performance of the underground facility and to detect ground conditions that could affect operational safety
Central Monitoring System	Facility Operations	System Dependent	Monitor and provide status for the following facility parameters:  Electrical Power Status <sup>d</sup>  Fire Alarm System <sup>e</sup>  Ventilation System Status <sup>f</sup>  Meteorological Data System <sup>g</sup>  Facility Systems (compressors <sup>g</sup> , pumps <sup>h</sup> , water tank levels <sup>i</sup> , waste hoists <sup>j</sup> )

<sup>b</sup> Equipment is listed as Underground-Geomechanical Instrumentation System (GIS) in Table D-1.

<sup>d</sup> Equipment listed as Backup Power Supply Diesel Generator in Table D-1.

<sup>e</sup> Equipment listed as Fire Detection and Alarm System in Table D-1.

<sup>f</sup> Equipment listed as Ventilation Exhaust in Table D-1.

<sup>g</sup> Not RCRA equipment.

<sup>h</sup> Equipment listed as Fire Pumps in Table D-1.

<sup>i</sup> Equipment listed as Water Tank Level in Table D-1.

<sup>j</sup> Equipment listed as Waste Hoist in Table D-1.